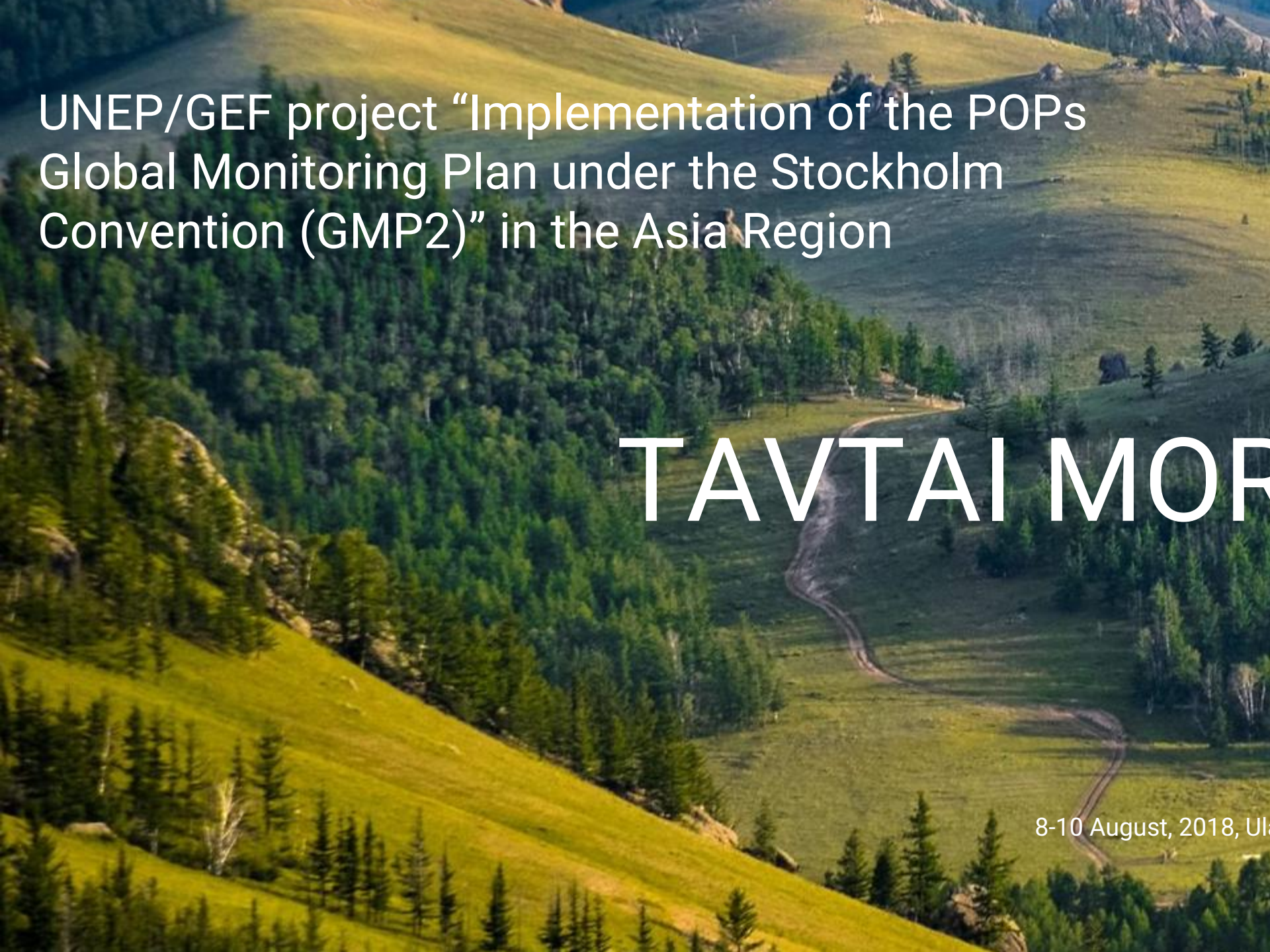




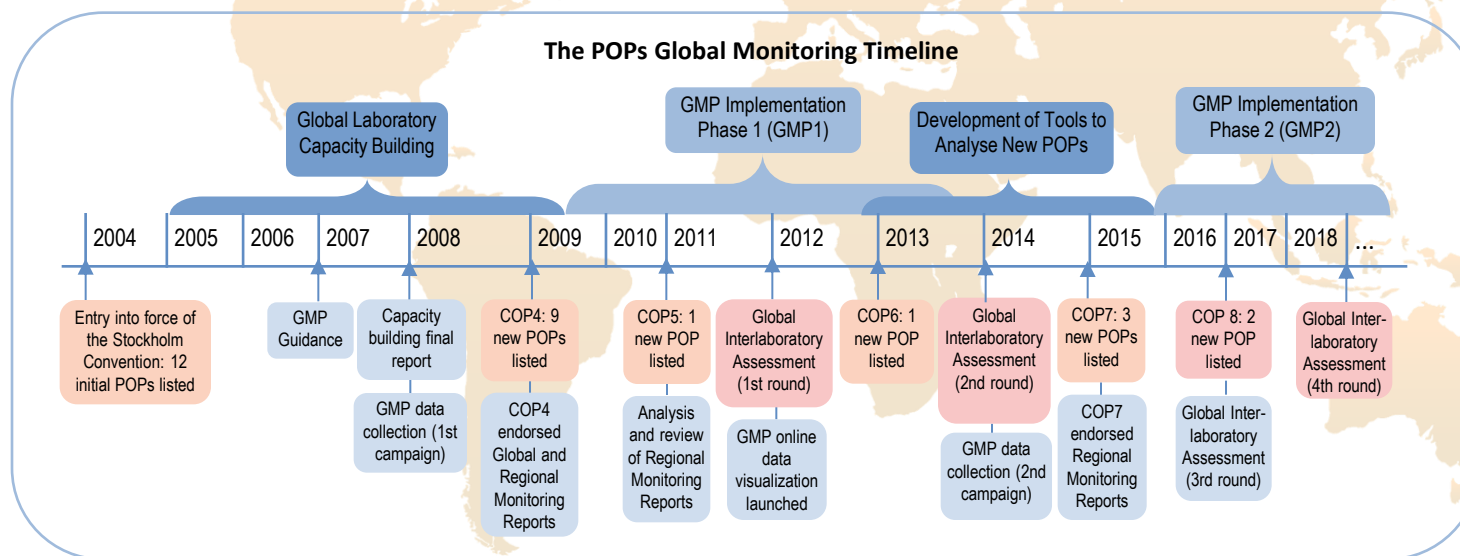
UNEP/GEF project “Implementation of the POPs
Global Monitoring Plan under the Stockholm
Convention (GMP2)” in the Asia Region

TAVTAI MOR

8-10 August, 2018, UL

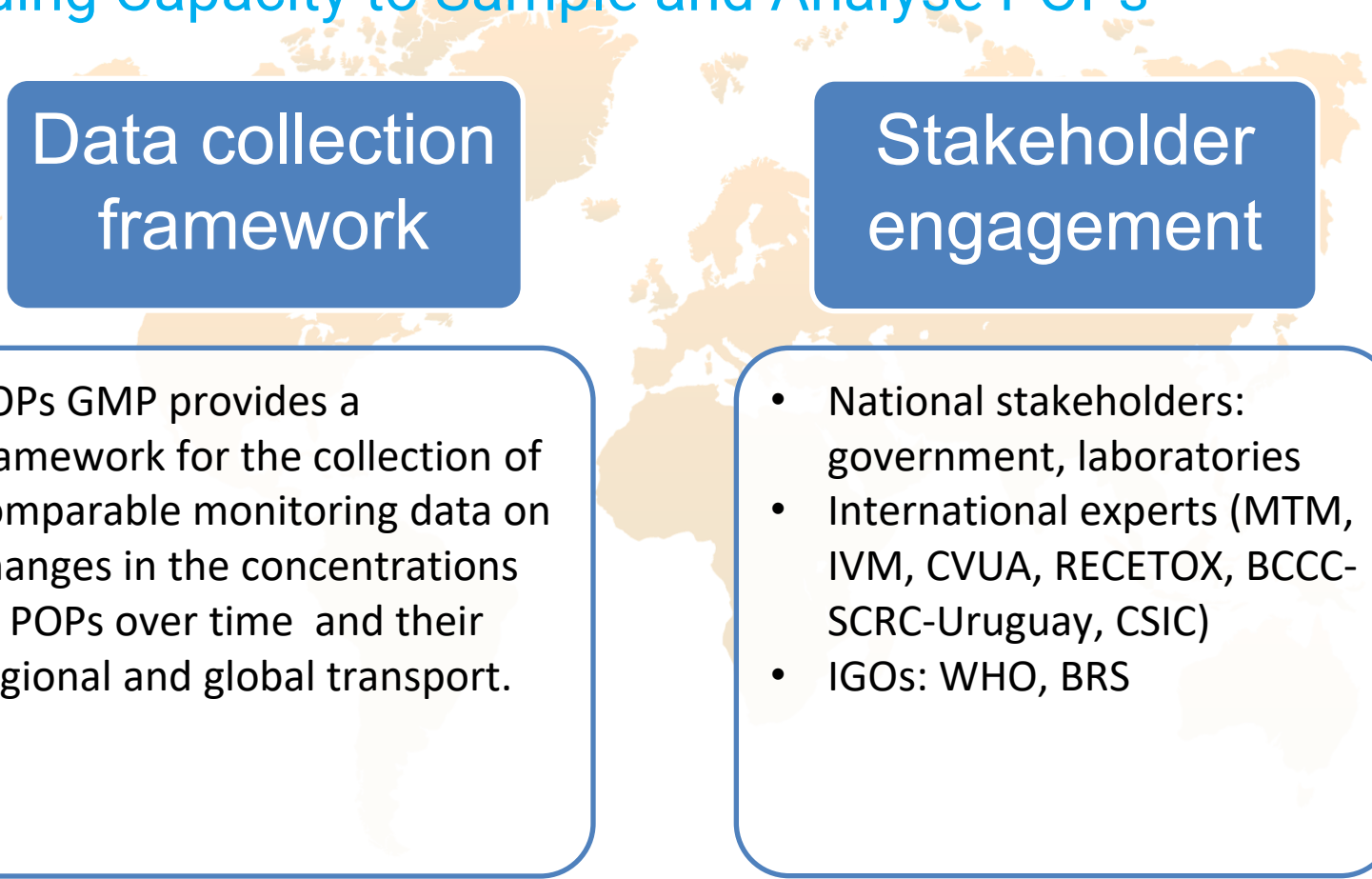
From GMP 1 to GMP 2

The first phase GMP projects were conducted in parallel in Africa, Asia, Latin American and the Caribbean (GRULAC) and the Pacific regions from 2009 to 2012, provided data on human exposure and environmental concentration of the 12 POPs originally included for the Stockholm Convention effectiveness evaluation. Building on the success of GMP1 and according to decision SC-6/23, four GMP follow-up projects (GMP2) are being implemented in the African, Asian, GRULAC and Pacific Regions.



UNEP/GEF POPs Global Monitoring Plan

Building Capacity to Sample and Analyse POPs



Data collection framework

POPs GMP provides a framework for the collection of comparable monitoring data on changes in the concentrations of POPs over time and their regional and global transport.

Stakeholder engagement

- National stakeholders: government, laboratories
- International experts (MTM, IVM, CVUA, RECETOX, BCCC-SCRC-Uruguay, CSIC)
- IGOs: WHO, BRS

UNEP/GEF GMP 2

1

Build capacity and generate data on analysis of core abiotic matrices (air and water) - two years of passive air sampling and water sampling

2

Build capacity and generate data on analysis of core biotic matrices (human milk) - one round of human milk sampling

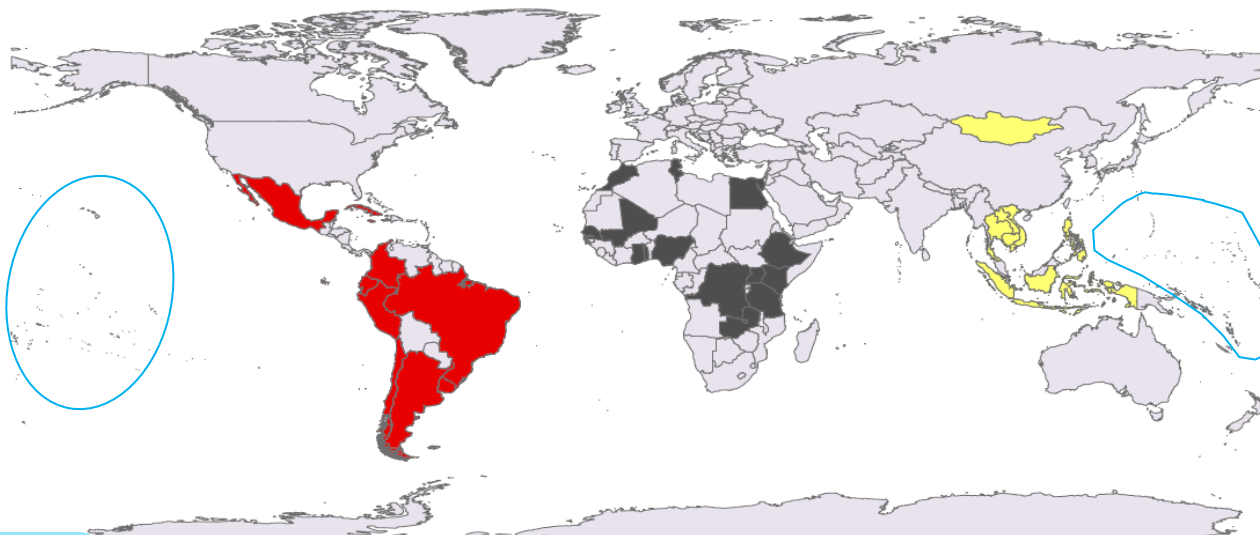
3

Assess existing analytical capacities and reinforce national POPs monitoring—two rounds of interlaboratory assessments and national samples

4

Secure conditions for sustainable POPs monitoring (tools and methods, training)

Countries participating in GMP2



Pacific Islands (10 countries): Fiji; Kiribati; Marshall Islands; Niue; Palau; Samoa; Solomon Islands; Tuvalu; Vanuatu

GRULAC (11 countries): Antigua and Barbuda; Argentina; Barbados; Brazil; Chile; Colombia; Ecuador; Jamaica; Mexico; Peru; Uruguay

Africa (15 countries): DR Congo; Egypt; Ethiopia; Ghana; Kenya; Mali; Morocco; Mauritius; Nigeria; Senegal; Tanzania; Togo; Tunisia; Uganda; Zambia

Asia (7 countries): Cambodia; Indonesia; Lao PDR; Mongolia; Philippines; Thailand; Vietnam

GMP in Asia for the First Time

Baseline

- Regional monitoring networks
- National analytical capacity
- Participation in interlaboratory assessments

Under GMP2

- More matrices, more POPs
- National commitment
- Sustainable monitoring of POPs with joint efforts

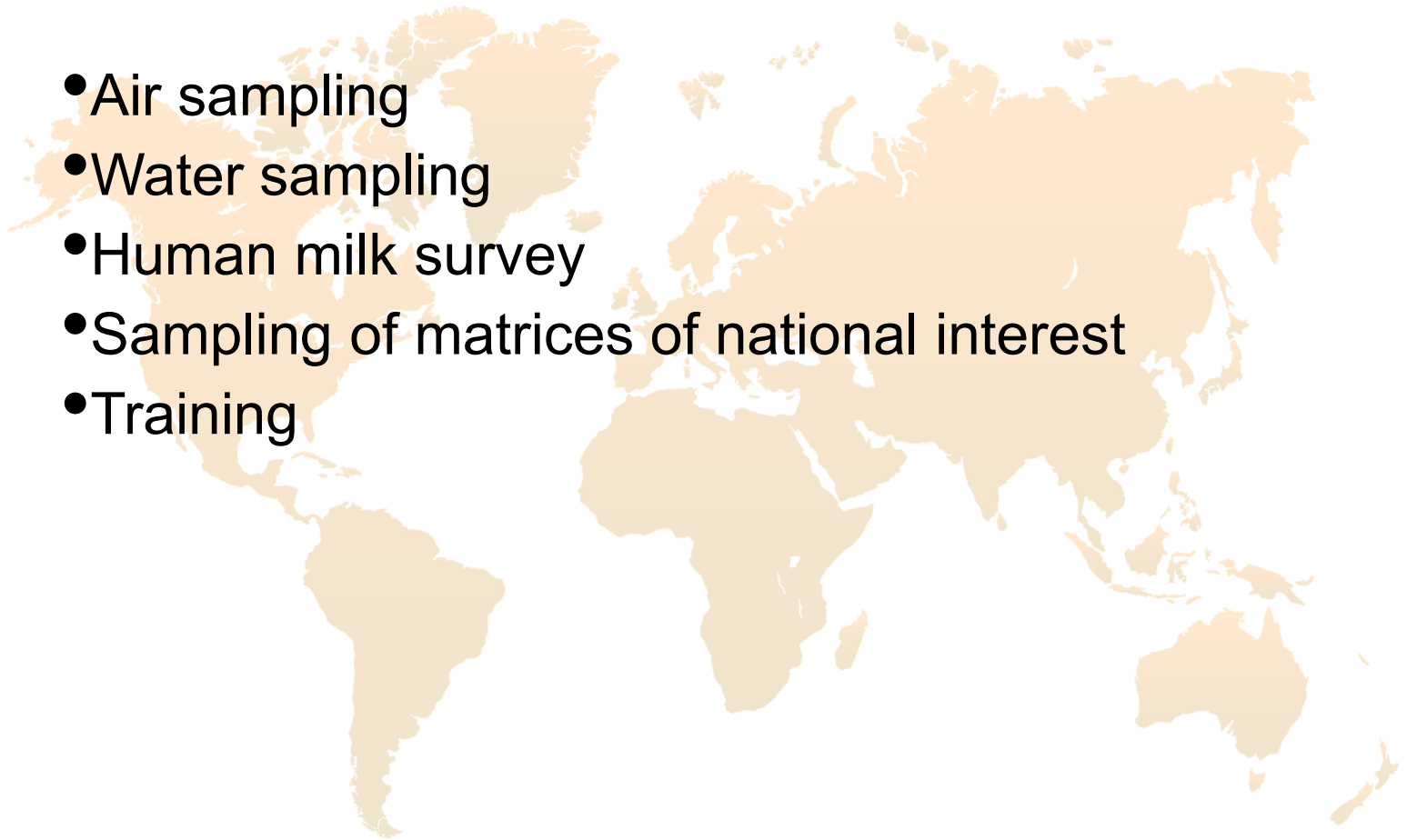
Challenges

- First time collaboration with multiple stakeholders, such as custom, human milk ethical clearance committee, expert laboratories
- Internal and external unexpected obstacles

Progress of the GMP project in Asia

National activities under the GMP project

- Air sampling
- Water sampling
- Human milk survey
- Sampling of matrices of national interest
- Training



Asia

Country	2017-I	2017-II	2017-III	2017-IV	2018-I	2018-II	2018-III
Cambodia							Ongoing
Indonesia							Ongoing
Lao PR							Ongoing
Mongolia							Ongoing
Philippines							Ongoing
Thailand							Ongoing
Vietnam							Ongoing



Philippines



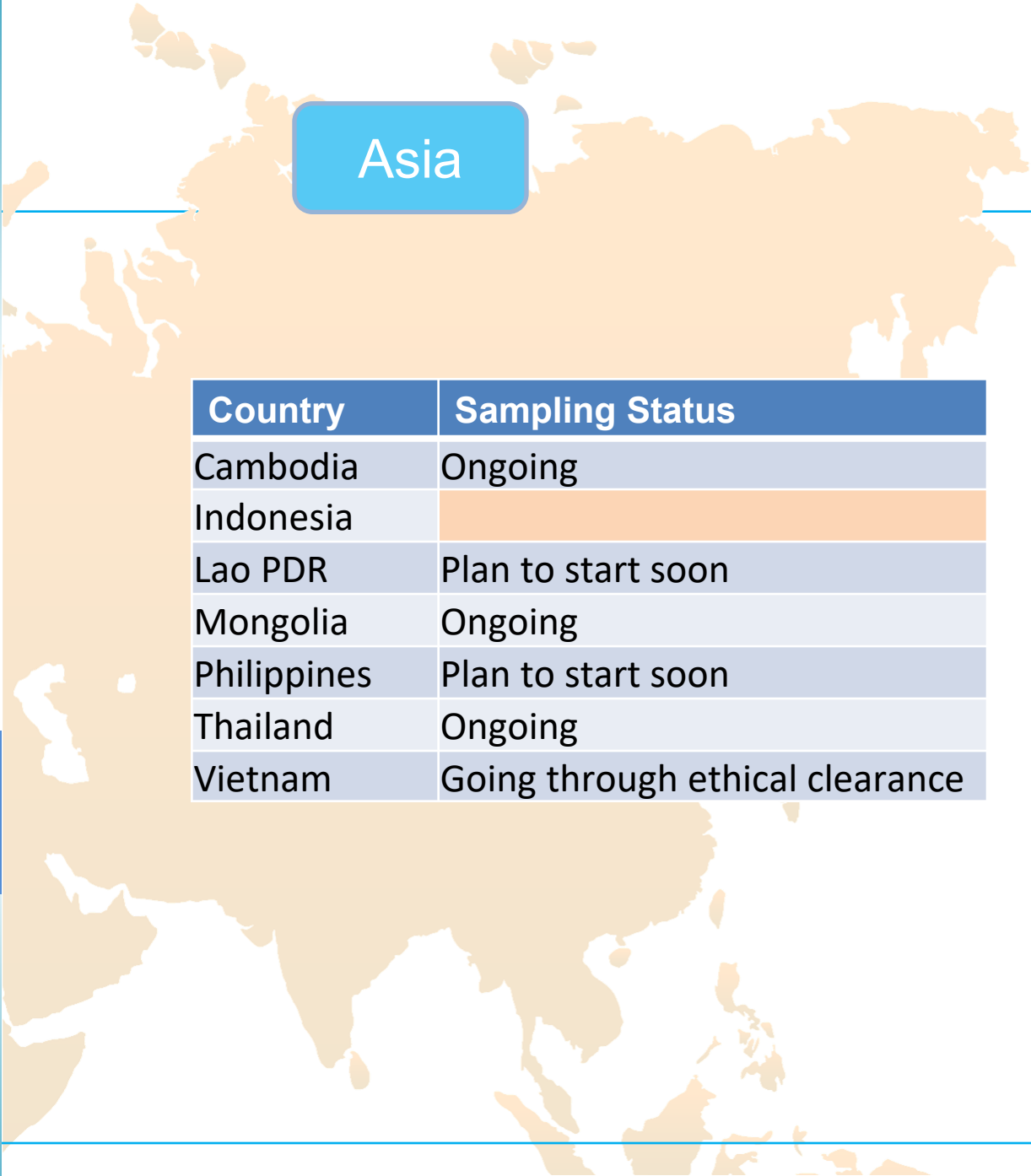
Lao PDR

Asia

Country	2017-I	2017-II	2017-III	2017-IV	2018-I	2018-II	2018-III
Mongolia							Ongoing
Vietnam							Ongoing



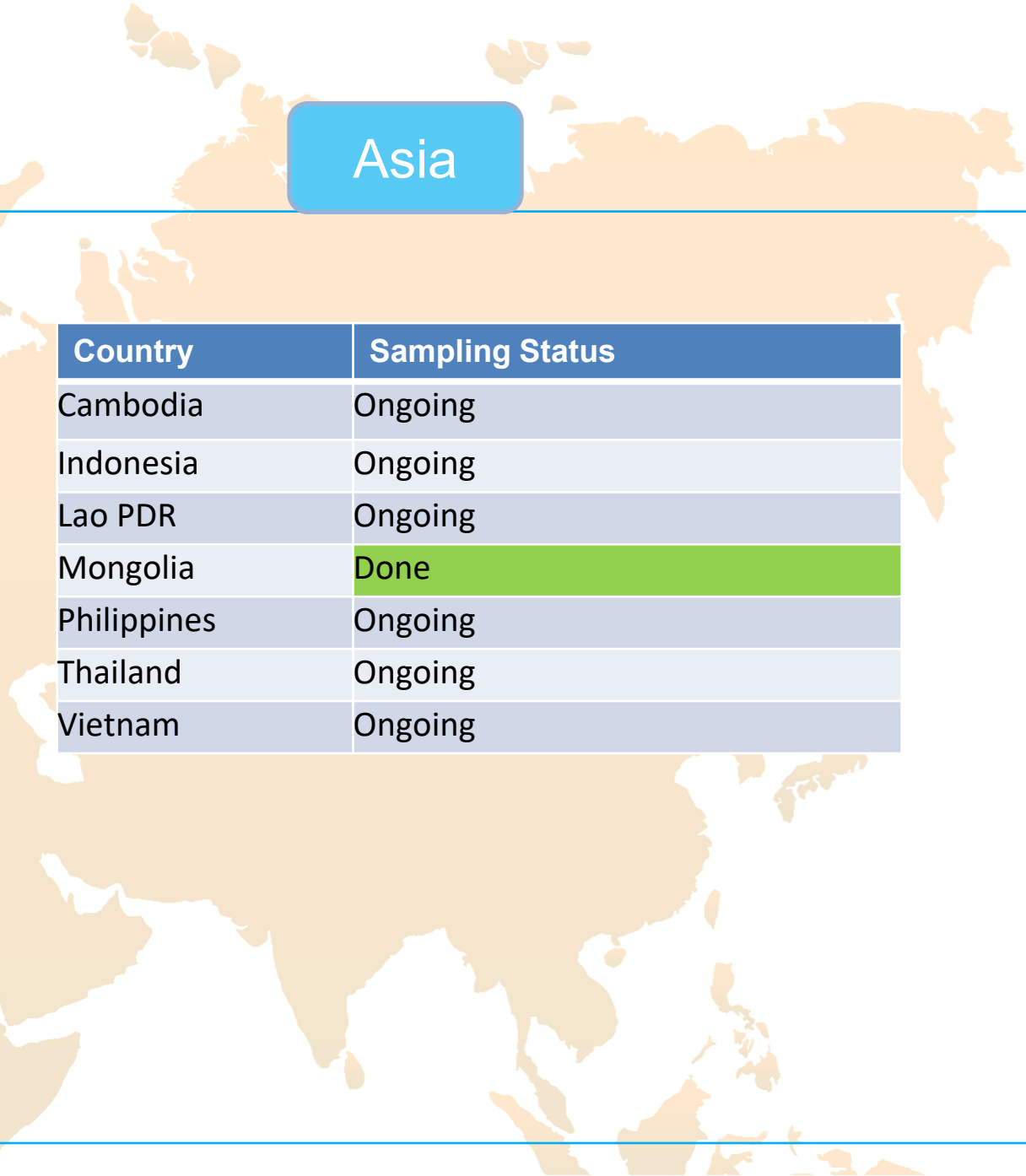
Mongolia Water Sampling

A light orange map of the Asian continent is shown in the background. A blue rounded rectangle with the word "Asia" is positioned over the northern part of the map. A blue vertical bar on the left side of the slide contains the text "Human milk".

Asia

Country	Sampling Status
Cambodia	Ongoing
Indonesia	
Lao PDR	Plan to start soon
Mongolia	Ongoing
Philippines	Plan to start soon
Thailand	Ongoing
Vietnam	Going through ethical clearance

Human
milk



Asia

National samples

Country	Sampling Status
Cambodia	Ongoing
Indonesia	Ongoing
Lao PDR	Ongoing
Mongolia	Done
Philippines	Ongoing
Thailand	Ongoing
Vietnam	Ongoing

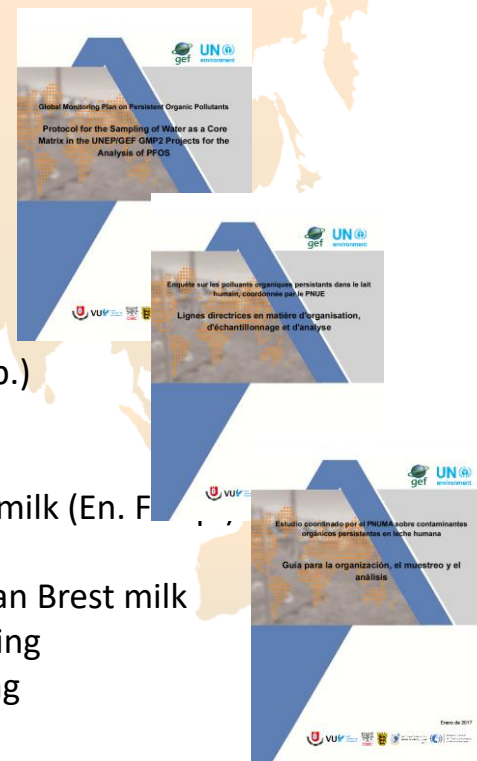
Development of Tools and Methods

- To ensure that over time and between regions, the same basic approaches and quality criteria for acceptance of data and assessment of results are applied.
- Core partners: MTM, IVM, LATU, CSIC, CVUA, RECETOX

SOPs

List of tools and methods developed

- General procedure for analysis of PFOS (En. Fr. Sp.)
- General procedure for analysis of PCB and OCP (En.Fr.Sp.)
- General Procedure for analysis of PBDE (En. Fr. Sp.)
- General procedure for the analysis of PFAS water (En. Fr. Sp.)
- General procedure for the analysis of dl-POPs (En. Fr. Sp.)
- Standard Operating Procedure for passive air sampling (En. Fr. Sp.)
- Standard Operating Procedure for water sampling (En.)
- Standard Operating Procedure for national samples (En. Fr. Sp.)
- Standard Operating Procedure for the sampling of human Breast milk (En. Fr. Sp.)
- Standard Operating Procedure for active air sampling (En.)
- Video of standard operating procedure for the sampling of human Breast milk
- Video of the standard operating procedure for passive air sampling
- Video of the standard operating procedure for active air sampling
- Sync of SOPs and videos



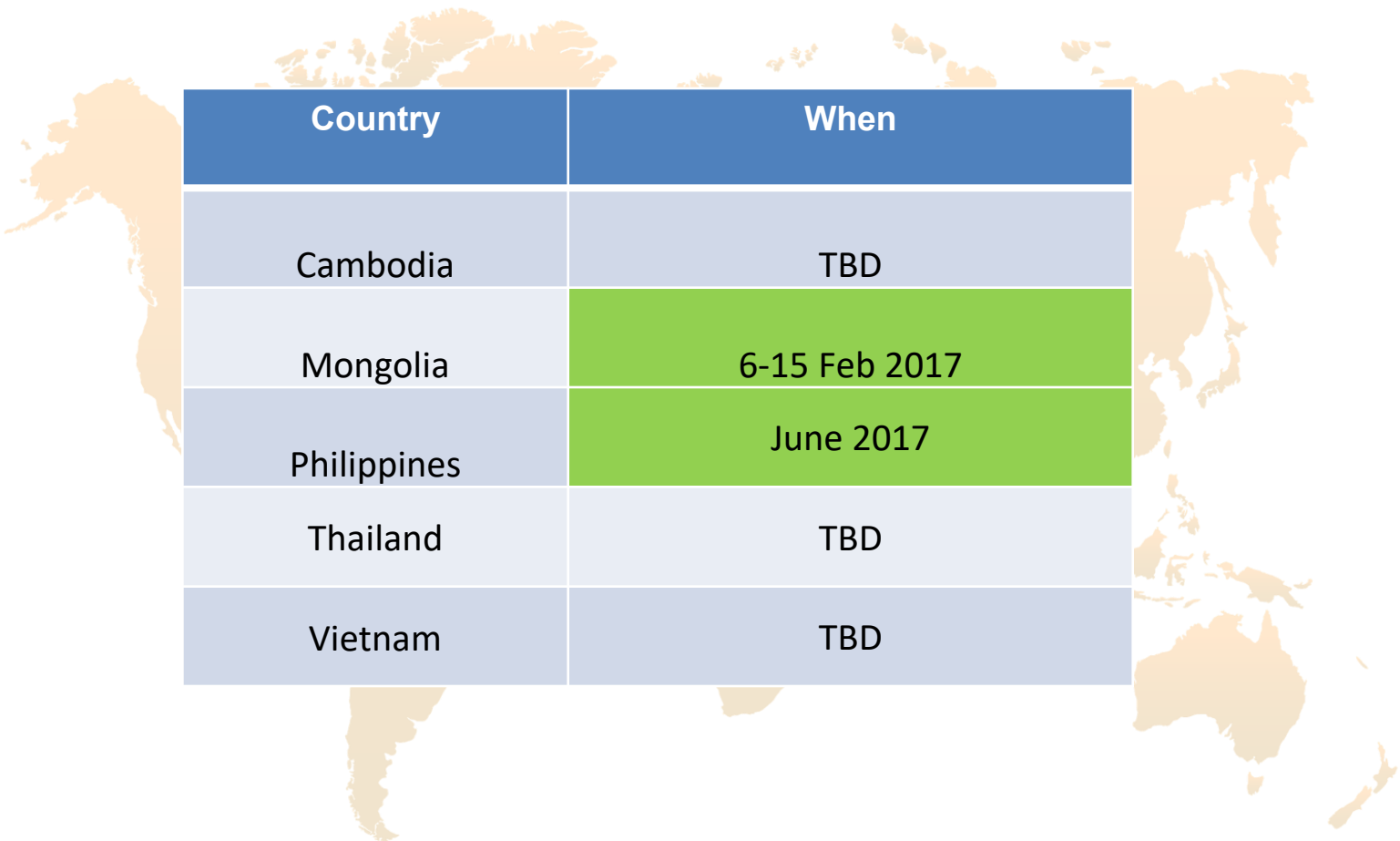
Africa

Asia

Pacific

GRULAC

Training



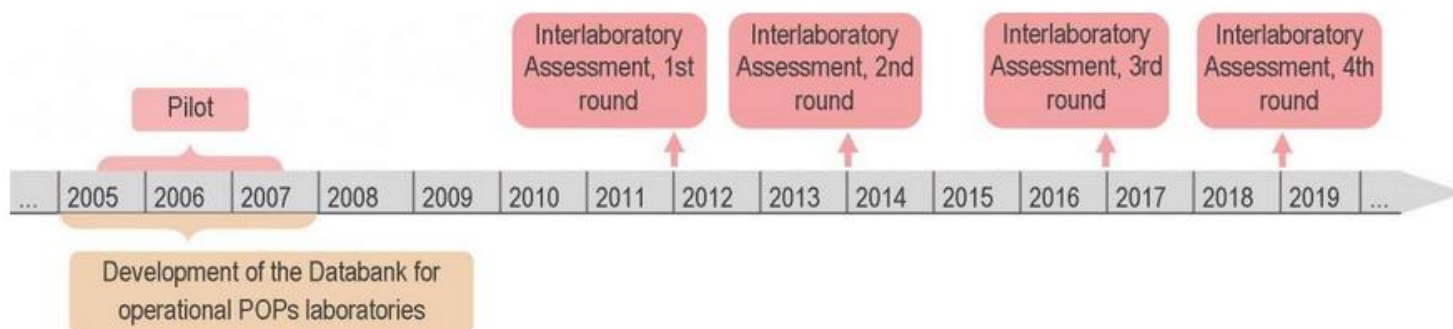
Country	When
Cambodia	TBD
Mongolia	6-15 Feb 2017
Philippines	June 2017
Thailand	TBD
Vietnam	TBD

Global Interlaboratory Assessment

IL

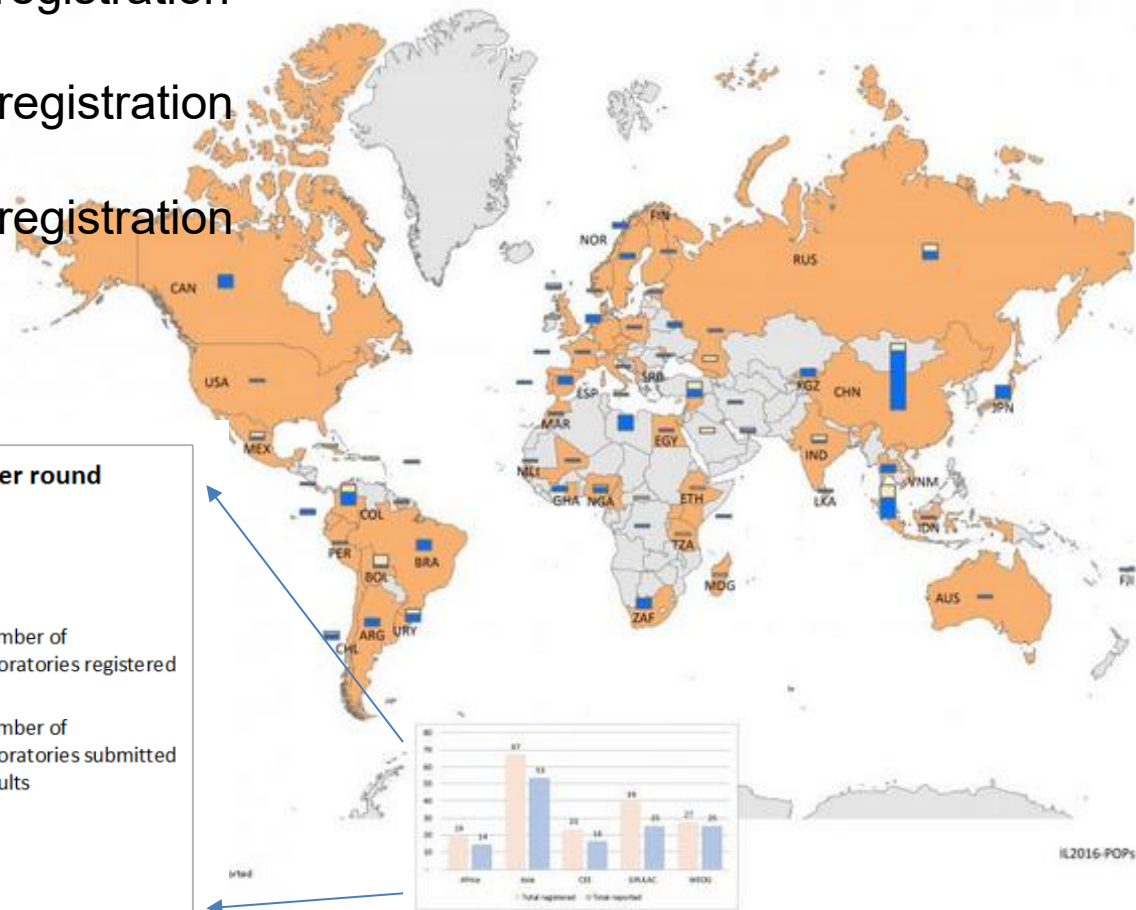
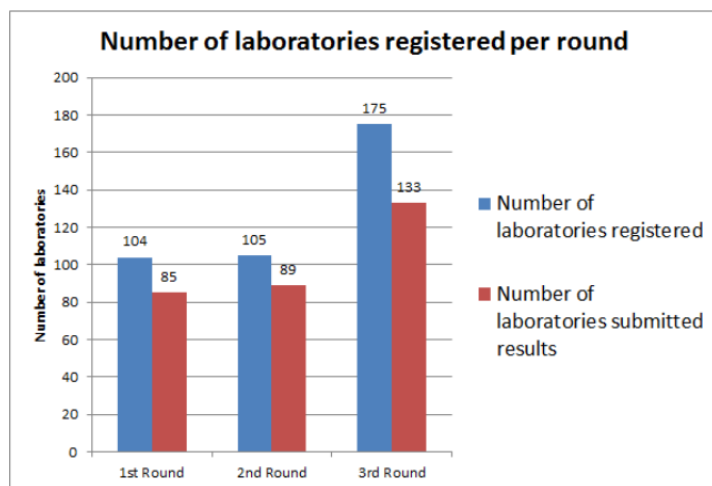
As part of the POPs Global Monitoring Plan, the Global Interlaboratory Assessment aims to

- Enhance communication and information sharing among laboratories to compare and validate data
- Identifies good practices and lessons learned for the analysis of the POPs under the Stockholm Convention



Global Interlaboratory Assessment

- 1IL 2010-2011, 104 registration
- 2IL 2013-2014, 105 registration
- 3IL 2016-2017, 175 registration
- 4IL 2018-2019



POPs Laboratory Databank

Data-
bank

- Update of the BRS POPs laboratory databank, with new user interface and advanced searching functions added;
- The results of the interlaboratory assessments will be included in the POPs Laboratory Databank;
- Will be publically available on the K&R Unit's webpage and BRS webpage;
- 256 laboratories included at present.

Portal

UNEP DATABANK OF LABORATORIES ANALYZING MERCURY AND POPs
"Hg & POPs LABORATORY DATABANK"

UN environment

POP Laboratory Databank
Last Update: May 14th, 2012

POP Laboratory Databank
Last Update: April 14th, 2012

Lab list

UNEP DATABANK OF LABORATORIES ANALYZING POPs

Extended Filters

Export to Excel

1 - 20 of 256 Laboratories

Laboratory	Country	Region
Department Analytical Services	Antigua and Barbuda	GRULAC
CETA - Centro de Estudios Transdisciplinarios del Agua	Argentina	GRULAC
CIT - Centro de Investigaciones Toxicológicas	Argentina	GRULAC
INTI - Contaminantes Orgánicos	Argentina	GRULAC
LAQAB - Laboratorio de Química Ambiental y Biogeoquímica	Argentina	GRULAC
LECA - Laboratorio Experimental de Calidad de Aguas	Argentina	GRULAC
National Measurement Institute	Australia	WEOG
Synlab Umweltstudia GmbH	Austria	WEOG
Umweltbundesamt GmbH	Austria	WEOG
Public Analyst Laboratory	Bahamas	GRULAC
SAB - Government Analytical Services	Barbados	GRULAC
The Department of Organization of Analytical Control of the Ministry of Natural Resources and Environmental Protection	Bolivia	CEE

Lab portfolio

UNEP DATABANK OF LABORATORIES ANALYZING POPs

Laboratory: Umweltbundesamt GmbH [not/None]

General Staff Clients Sampling Extraction and Determination Identification Methods Number of samples External Cost

QA Accreditation Inter calibration Tiers Publications Comments

Identity and General Description

Name of Laboratory: Umweltbundesamt GmbH

Address: Spillhofen Linde 5

City / State: Vienna

Country: Austria

Postal Code: A-1030

Telephone: +43 (0) 1310340

Fax: +43 (0) 13104 3488

E-mail: wolfgang.mochle@umweltbundesamt.at

Web Site: www.umweltbundesamt.at

Contact Person (P1): Dr. Wolfgang MOCHLE

Position/Job title: E-Mail: Telephone: Mobile:

Contact Person (P2): Position/Job title: E-Mail: Telephone: Mobile:

Type of Laboratory: Public / Governmental: Yes Private: No

Research Center: No

Function of the Laboratory: The chemical analytical laboratory of the Federal Environment Agency established in 1960, performs sampling and organic and inorganic trace analysis in all environmental media. The monitoring of environmental pollutants is essential to support official decision making and to study emerging environmental issues. Various organic and inorganic pollutants, such as pesticides, PCBs, POPs, hormones, dioxin/furan, heavy metals in water, soil, waste, sludge, composite chemicals, air, PM10, products and other media are part of these monitoring programs. Additionally,

Advanced filters

UNEP DATABANK OF LABORATORIES ANALYZING POPs

Extended Filters (None applied)

Accreditation Extraction and Determination Inter calibration Matrices and POPs Methods Number of Samples Tiers

EXTRACTION METHODS

☐ P = Pressurized fluid (PFE)

☐ D = Dilution

☐ F = Solid phase (SPE)

☐ L = Liquid/Liquid

☐ S = Soxhlet

☐ U = Ultrasonic

☐ C = Supercritical fluid (SFE)

☐ M = Microwave

INSTRUMENTATION

☐ 1 = Packed column or HPLC + ECD or FID

☐ 2 = Capillary column + ECD

☐ 3 = Capillary column + LIMS

☐ 4 = Capillary column + HRMS

☐ 5 = Capillary column + MS/MS

☐ 6 = No instrumentation for determination

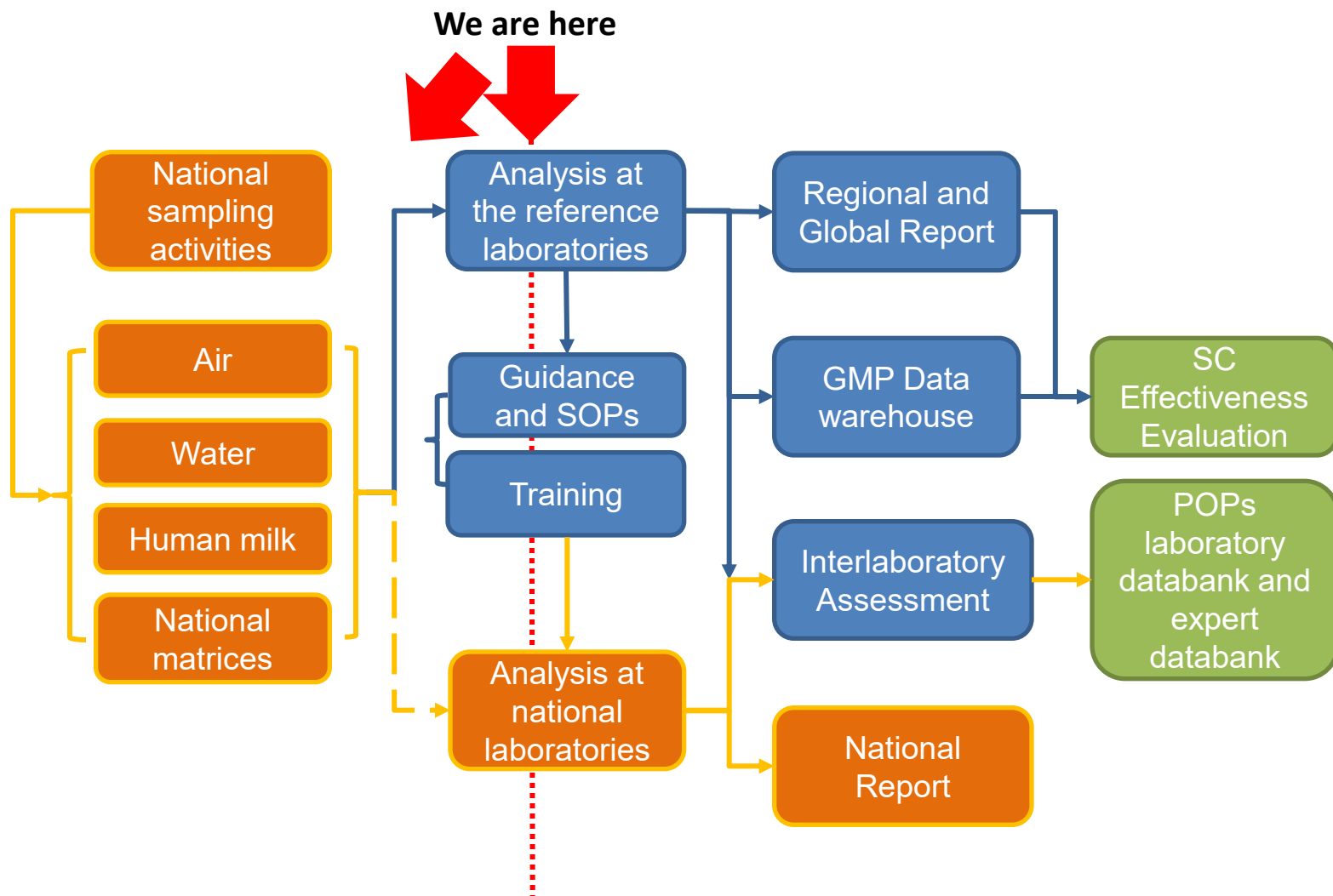
Apply filter Remove filter

Export to Excel

1 - 20 of 256 Laboratories

Laboratory	Country	Region
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CIT - Centro de Investigaciones Toxicológicas	Argentina	GRULAC
INTI - Contaminantes Orgánicos	Argentina	GRULAC
LAQAB - Laboratorio de Química Ambiental y Biogeoquímica	Argentina	GRULAC

At the mid-term, we look forward to



Africa

Asia

Pacific

GRULAC

Data-
bank

IL

Training

SOPs

Nat'Act

A stylized world map in a light orange color, centered on the Atlantic Ocean, serving as a background for the central text.

BAYARLALAA

Jacqueline Alvarez
Head, Knowledge and Risk Unit
UN Environment Chemicals and Health Branch
Email: Jacqueline.alvarez@un.org